UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TX 75270

October 29, 2019

CERTIFIED MAIL 7007 3020 0000 1523 1328 RETURN RECEIPT REQUESTED

Mr. Dieter J. Schultz
Project Manager - U.S. South Execution
ExxonMobil Environmental & Property Solutions Company
ExxonMobil Houston Campus - W3.2A.581
22777 Springwoods Village Pkwy
Spring, TX 77389

RE: ExxonMobil UIC Petition Reissuance Final Approval Decision for Wells WDW-397 & WDW-398

Dear Mr. Schultz:

The land disposal restrictions prohibit the injection of hazardous waste unless a petitioner can demonstrate to EPA, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the injection zone for as long as the wastes remain hazardous. The land disposal restrictions for injection wells codified in 40 CFR Part 148 provide the standards and procedures by which petitions to dispose of an otherwise prohibited waste by injection will be reviewed and by which exemptions pursuant to these petitions will be granted or denied. Part 148 also provides for the reissuance of an exemption if the reissuance complies with the above-mentioned standards.

A letter dated 5/29/19 informed ExxonMobil that EPA was proposing to approve its petition reissuance request for an exemption to the land disposal restrictions. There were two public comment periods for this decision because the newspaper failed to publish the first notice. They were 6/12 – 7/29/19 and 8/21 – 10/7/19 and no comments were received.

Based on a detailed technical review of the petition reissuance request and support documents, EPA has determined that this information for the ExxonMobil site meets the requirements of 40 CFR Part 148 by demonstrating that, to a reasonable degree of certainty, there will be no migration of hazardous constituents from the injection zone for 10,000 years.

The following are conditions of this land disposal restrictions exemption.

Final Petition Reissuance Approval Conditions

This approval of a petition for reissuance of an exemption to allow the injection of restricted hazardous wastes is subject to the following conditions, which are necessary to assure that the standard in 40 CFR §148.20(a) is met. Noncompliance with any of these conditions is grounds for termination of the exemption in accordance with 40 CFR §148.24(a)(1). This exemption is applicable to the ExxonMobil injection wells: WDW-397 and WDW-398, located at the PCI Nitrogen fertilizer plant in Pasadena, TX.

1. Injection of restricted waste shall be limited to the following injection zone and intervals:

Well	Injection Zone Depths (feet)	Injection Interval Depths (feet) Frio D, E&F, and A/B Sands
WDW-397	5347'-7272' KB	5922'-7272' KB
WDW-398	5370'-7295' KB	5965'-7295' KB

(WDW-397 depths are referenced to 3/08/06 High Resolution Array Induction Density Neutron Longspace Sonic Log using Kelly Bushing (KB) depths in feet; WDW-398 depths are referenced to 7/18/09 Array Induction Log using KB depths in feet)

Note that the Injection Zone and Interval bases are below the total depth of each well.

Injection of restricted waste shall also be limited to completion intervals which are within the defined injection interval and below a depth of 6210' KB in WDW-397 and 6276' KB in WDW-398.

2. The limit for the cumulative volume injected into WDW-397 and WDW-398 on a monthly basis is as follows:

   Frio D Sand: (408 gpm) X (1440 minutes/day) X (number of days in that month)*
   Frio E & F Sand: (1200 gpm) X (1440 minutes/day) X (number of days in that month)
   Frio A/B Sand: (1200 gpm) X (1440 minutes/day) X (number of days in that month)

   In addition, the total cumulative monthly wellhead volume for WDW-397 and WDW-398 shall not exceed (1,200 gpm) X (1440 minutes/day) X (number of days in that month).

   *WDW-398 is not, and will not be, completed to inject into the Frio D Sand

3. The facility shall cease injection by December 31, 2040.

4. The characteristics of the injected waste stream shall at all time conform to those discussed in Section 6.0 and listed in Table 6-3 in the 2017 petition reissuance document. The specific gravity of the waste stream shall remain within a range of 1.00 to 1.05 as measured at 68°F and 1 atmosphere. The reference temperature for the specific gravity analyzer will be 60°F.

5. This approval for injection is limited to the following hazardous wastes:
   D002, D004, D005, D006, D007, D008, D009, D023, D024, D0025, D030, and F039 (for the constituents listed in Table 6-3 in the 2017 petition reissuance document)

6. The facility must petition for approval to inject additional hazardous wastes which are not included in Condition No. 5 above. The facility must also petition for approval to increase the concentration of any waste which would necessitate the recalculation of the limiting concentration reduction factor and the extent of the waste plume. Petition modifications and reissuance should be made pursuant to 40 CFR §148.20 (e) or (f).

7. A flow profile survey, acceptable to the Agency, shall be run annually in both WDW-397 and WDW-398 to confirm flow distribution into the Frio D, E&F and A/B Sands. The flow profile survey in WDW-397 will confirm that the injection rate into the Frio D Sand does not exceed 408 gpm for any monthly average total injection rate into WDW-397.

   In addition, for either WDW-397 or WDW-398, upon recompletion into any newly perforated portion of the Injection Interval, the following must be done:

A flow profile survey, acceptable to the Agency, shall be run. If the flow rate into the existing perforations becomes less than that currently modeled, the transmissivity and porosity employed in the modeling demonstration must be re-evaluated. This must be done prior to the re-establishment of injection of the wastes covered by this petition approval into the affected well and redemonstrated on an annual basis.

8. ExxonMobil shall annually submit to EPA the results of a bottomhole pressure survey for WDW-397 and WDW-398. These surveys shall be performed after shutting in each well for a period sufficient to allow the pressure in the injection interval to reach equilibrium, in accordance with 40 CFR §146.68(e)(1). The annual report should include a comparison of reservoir parameters determined from the falloff test with parameters used in the approved no migration petition reissuance. This should include a comparison of the current year's test results for the static and flowing bottomhole pressures with the values demonstrated in the approved petition reissuance and a comparison of the test results for transmissibility [Kh/μ (mD-ft/cP)] with the transmissibilities used in the approved petition reissuance demonstration for the pressure buildup and 10,000 year plume modeling.

9. ExxonMobil shall also annually submit to EPA a radioactive tracer survey and annulus pressure test for WDW-397 and WDW-398.

10. ExxonMobil shall notify EPA if WDW-397 or WDW-398 loses mechanical integrity, prior to any well work on WDW-397 or WDW-398, or if ExxonMobil plans to plug WDW-397 or WDW-398. If any well work or plugging is being planned, ExxonMobil shall also submit the procedures to EPA for review prior to commencing any work.

11. Upon the expiration, cancellation, reissuance, or modification, of the Texas Commission on Environmental Quality's Underground Injection Control (UIC) permit for WDW-397 and/or WDW-398, this exemption is subject to review. A new demonstration may be required if information shows that the basis for granting the exemption is no longer valid under 40 CFR §148.23 and §148.24.

In addition to the above conditions, this approval of a petition for reissuance of an exemption is contingent on the validity of the information submitted in the ExxonMobil petition reissuance request for an exemption to the land disposal restrictions. This final reissuance decision is subject to termination when any of the conditions occur which are listed in 40 CFR §148.24, including noncompliance, misrepresentation of relevant facts, or a determination that new information shows that the basis for approval is no longer valid.

If you have any questions or comments, please call Brian Graves at (214) 665-7193 or email him at graves.brian@epa.gov.

Sincerely,

Rahul Rao for

Charles W. Maguire
Director
Water Division

ecc: Ms. Lorrie Council, TCEQ
Mr. Richard Heitzenrater, TCEQ Region 14